

Patent claims

1. (currently amended) A rotor, generating lift, ~~at least~~ comprising at least two rotor blades and a generally vertical rotor shaft having a central axis, each rotor blade extending outwards from the rotor shaft, ending in a tip, the rotor having a rotating plane defined by a path that each tip of the rotor blades follows when the rotor rotates, wherein
the rotating plane is tiltable in any direction with respect to a reference plane perpendicular to the rotor shaft axis,
at least a part of one or more of the rotor blades has a pitch angle generally fixed relative to said reference plane,
at least a part of one or more of the rotor blades has a pitch angle generally fixed relative to the rotating plane.
2. (original) A rotor according to claim 1, wherein the part of the rotor blades having a pitch angle generally fixed relative to the rotating plane is the part of the blade in the region of the tip, and wherein the part of the blades having a pitch angle generally fixed relative to said reference plane is the inner part of the blade.
3. (original) A rotor according to claim 2, wherein at least one of the rotor blades are made of a flexible material enabling said rotor blade to twist in a longitudinal direction.
4. (original) A rotor according to claim 3, wherein a first set of rotor blades are connected to the rotor shaft by a first flexible or pivoting hinge with a hinge axis generally perpendicular to both the rotor blades and the rotor shaft, and a second set of rotor blades arranged perpendicular to the first set and connected to the rotor shaft by a second flexible or pivoting hinge with a hinge axis generally perpendicular to both the second set of rotor blades and the rotor shaft, and where at least the inner part of all the rotor blades have a pitch angle that remains fixed relative to said reference plane when the rotor is tilted up and down or sideways, and wherein the rotor blades at their tip are connected to a ring encircling the rotor.
5. (original) A rotor according to claim 4, wherein the rotor blades are inclined upward with respect to said reference plane, giving the rotor a conical geometry.
6. (original) A rotor according to claim 1, wherein at least one of the rotor blades is comprised of two or more elements, flexible or hinged connected to each other and where at least one element of said rotor blade having a pitch angle generally fixed relative to said reference plane and at least

one other element of said rotor blade having a pitch angle generally fixed relative to the rotating plane.

7. (cancelled)

8. (original) An aircraft passively stable in hover, said aircraft comprising at least one rotor according to claim 1-6.

9. (original) An aircraft according to claim 8 further comprising a means adapted to enable controlled tilting of the aircraft.

10. (original) The aircraft according to claim 9 wherein the means for tilting the aircraft is a means for generating a controllable vertical thrust vector connected to said aircraft at a horizontal distance from said rotor.

11. (cancelled)

12. (original) The aircraft according to claim 9, comprising two rotors, placed one above the other, said two rotors rotating in opposite directions, creating a coaxial, counter-rotating rotor assembly, wherein the rotational speed of said two rotors can be controllably changed relative to each other, to provide yaw control.

13. (cancelled)

14. (currently amended) An aircraft according to ~~any of~~ claims 8-13, wherein the aircraft is a passively stable flying toy, either as a remotely controlled toy helicopter or as any other kind of hovering toy aircraft.